

Appl. No. : 10/631,117
Filed : July 31, 2003

COMMENTS

In response to the Office Action dated June 13, 2005, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the above-amendments and the following remarks.

Allowable Subject Matter

Applicant notes with appreciation that the Examiner has allowed Claims 5-7 and 12 and has indicated that Claim 17 would be in condition for allowance if it is rewritten into independent form.

Claim Rejections – 35 U.S.C. § 112

Claim 19 has been amended to correct the informality noted by the Examiner.

Claim Rejections – 35 U.S.C. § 102(e) and § 103(a)

Claims 1-4, 8-11, 13-15 and 19 stand rejected under 35 U.S.C. §102(e) as being anticipated by Fukuda et al. (USPN 6,582,262) or, in the alternative, under 35 U.S.C. §103(a) as being obvious over Fukuda et al. (USPN 6,582,262). Claim 19 stands rejected under 35 U.S.C. §103(a) as being obvious over Fukuda in view of Ogawa (USPN 6,450,137). Applicant respectfully traverses the rejection of these claims.

In the Background, Fukuda stated that if that the length between the oil pump, the valve timing controlling mechanism and the valve timing adjusting mechanism is large, the actuating response of the valve timing adjusting mechanism deteriorates. *See* Col. 1 lines 60-65. Thus, an object of Fukada's invention was to "place the valve timing controlling mechanism close to the oil pump and the valve timing mechanism." *See* Col. 2, lines 39-48. Accordingly, Fukuda disclosed an outboard motor with a valve timing controlling mechanism 84 that is disposed on the head cover 24 or on the outer surface of the cylinder head 23 at a lower portion of the engine. *See* Col. 10, lines 60-63 and Figure 5.

In contrast, independent Claim 1 recites, in part, an internal combustion engine for an outboard motor comprising "a control valve unit configured to control the change mechanism, the control valve unit comprising an actuator and a valve member, the valve member at least in part being disposed within the outer area and above a cylinder head member, which forms at least a portion of the combustion chamber."

Independent Claim 15 recites, in part, an internal combustion engine for an outboard motor comprising "a control valve unit configured to control the change mechanism, the control valve unit at least in part being disposed within the outer area, wherein the outer

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surface is a top surface of the engine body, and the outer area is a top area that extends generally above the top surface.”

Independent Claim 19 recites, in part, an internal combustion engine for an outboard motor comprising an “engine body comprising a cylinder head member that forms a portion of a combustion chamber, the cylinder head member having an outer surface, a generally vertically extending output shaft extending through the engine body” and “a control valve unit configured to control the change mechanism, the control valve unit comprising an actuator and a valve member, the valve member being disposed along and above the outer surface.”

As noted above, Fukuda disclosed an outboard motor with a valve timing controlling mechanism 84 that is disposed on the head cover 24 or on the outer surface of the cylinder head 23. Fukuda did not disclose an outboard motor in which the valve timing controlling mechanism is disposed (i) “within the outer area and above a cylinder head member”, (ii) “within the outer area and above a cylinder head member” or (iii) wherein the valve member is “disposed along and above the outer surface” as recited in Claims 1, 15 and 19 respectively. Therefore, Claims 1, 15 and 19 cannot be anticipated by Fukuda because an anticipation rejection is proper only if a single reference shows every element of the claim as arranged in the claim. *See MPEP §2131.*

The Examiner argues, in the alternative, that these claims are obvious over Fukuda because “it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the teaching from the Fukuda reference to dispose the control valve unit on the cylinder head member, the said unit at least in part being disposed within a top area that extends generally above the top surface of the said cylinder head member (part of the engine body), since the use thereof would provide a more compact engine, with a better actuating response from the valve timing controlling mechanism.”

Applicant disagrees with the Examiner’s conclusion. As noted above, the object of Fukuda was to place the valve timing controlling mechanism close to the oil pump and the valve timing mechanism. Thus, the valve timing controlling mechanism 84 of Fukuda is positioned at a lower end of the engine near the oil pump 70. *See Figure 5.* Thus, rearranging the engine of Fukuda as suggested by the Examiner would involve significantly lengthening the distance between the valve timing controlling mechanism 84 and the oil pump 70, which would increase the actuating response time of the valve timing

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adjusting mechanism and defeat a central object of Fukuda. Thus, the proposed modification would render Fukuda unsatisfactory for its intended purpose, which was to decrease the actuating response time of the valve timing adjusting mechanism. Thus, there is no suggestion or motivation to make the modification suggested by the Examiner. *See* MPEP 2143.01 (“If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.”)

Ogawa, which is used in combination with Fukuda to reject Claim 18, merely disclosed a variable valve timing system with an axially moveable spool 104. Ogawa did not disclose the position of the valve with respect to an engine and, therefore, does not provide motivation to modify Fukada as suggested by the Examiner.

Therefore, Applicant respectfully submits that there is no motivation to modify Fukada as suggested by the Examiner and that the rejection of Claims 1, 15 and 19 is in error. Claims 2-4, 8-11, 13, 14, 17 and 18 depend upon Claims 1 and 15, and, for at least this reason, these claims are also in condition for allowance.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly. In addition, please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

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Respectfully submitted,

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